

CLAIMS

1. An electronic label reading system including:
at least one information bearing electronic coded label;
5 an interrogator including a transmitter coil and a receiver coil;
a magnetic field coupling link containing said transmitter coil and said receiver coil for obtaining information from said label;
wherein the coupling link is arranged such that it operates in the near field thereof and wherein substantially none or at most a minority of the magnetic flux which excites said receiver coil also links said transmitter coil.
- 10 2. An electronic label reading system as claimed in claim 1 wherein said transmitter or receiver coil contains a magnetic core.
3. An electronic label reading system as in claim 1 or 2 wherein said label includes a label antenna operated in proximity to a metal object and the metal object provides substantial reduction of the amount of magnetic field that would reach the receiver coil from the transmitter coil in relation to the magnetic field which would reach said receiver coil if the metal object were not present.
- 15 4. An electronic label reading system as claimed in claim 1 wherein said coupling link is used for signalling from the interrogator to the label.
- 20 5. An electronic label reading system as claimed in claim 1 wherein said coupling link is used for signalling from the label to the interrogator.
6. An electronic label reading system as claimed in claim 1 wherein the interrogator provides power to the label to generate a reply from the label.
- 25 7. An electronic label reading system as claimed in claim 1 wherein the label generates replies intermittently.
8. An electronic label reading system as claimed in claim 7 wherein power for the label comes from power supplied by the transmitter during the period of the label giving a reply.
- 30 9. An electronic label reading system as claimed in claim 4 wherein the label may be read while a sheet of metal is interposed between the interrogator and the label.

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19. An electronic label reading system as claimed in claim 14 wherein said holes are a natural part of said object.

31. An electronic label reading system as claimed in claim 30 wherein the rollers have a non-conducting surface or non-conducting bearings.

33. An electronic label as claimed in claim 32 wherein the length of said slot, in the direction perpendicular to the path of currents in the region of the slot, is significantly greater than the length of the label coil or its ferrite core in that direction.

35. An electronic label as claimed in claim 32 including a label
10 antenna wherein the label coil is resonant in its operating frequency band.

37. An electronic label as claimed in claim 32 wherein the object
15 being labelled is an airline cargo pallet, and said label is locked in position by
employing slots already made in said pallet for the purpose of cargo lock down.

39. An electronic label as claimed in claim 32 including a label
20 antenna coil wherein the label coil is excited by a magnetic field created by
surface currents on the metal object.

30 41. An electronic label as claimed in claim 40 wherein said pathway
is provided by holes in said metal object.

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42. An electronic label reading system as claimed in claim 41 wherein said currents induced on one side of said metal object travel toward an edge of said metal object.

43. An electronic label as claimed in claim 42 wherein edges of the
5 holes in said metal are perpendicular to the direction of said induced current direction.

44. A method of obtaining information from an electronic label in proximity to a metal object, said method including the steps of:

10 providing an interrogator containing a transmitter coil and a receiver coil;
providing a magnetic field coupling link containing said transmitter coil
and said receiver coil for obtaining information from said label; and

arranging said coupling link such that it operates in the near field thereof
and wherein substantially none or at most a minority of the magnetic flux which
excites said receiver coil also links said transmitter coil.

15 45. An electronic label reading system substantially as herein described with reference to the accompanying drawings.

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